REMARKS

Claims 1-12 have been examined and have been rejected under 35 U.S.C. § 102(b).

Preliminary Matters

A telephone Interview was conducted on August 9, 2005 between the Examiner and the undersigned. During the Interview, claims 1, 8, 11 and 12 were discussed. The Examiner indicated that Applicant's position appears reasonable, but that a further review of Suzuki would be necessary upon receipt of Applicant's formal Response.

Applicant submits that the above comments constitute a Statement of Substance of Interview.

Rejections under 35 U.S.C. § 102(b) in view of EP 0788882 to Suzuki et al. ("Suzuki")

The Examiner has rejected claims 1-12 under 35 U.S.C. § 102(b) as allegedly being unpatentable over Suzuki.

A. Claims 1 and 11

Applicant submits that claims 1 and 11 are patentable over the cited reference. For example, claims 1 and 11 recite a measuring unit that can measure a continuous operating time of a micro-vibrating unit, and a standard time storing unit that stores a predetermined standard time.

The Examiner points to the same portions of Suzuki as disclosing both the measuring unit and the standard-time storing unit. In particular, the Examiner refers column 3, lines 3-13, col. 8,

lines 51-57, col. 9, lines 10-17 and col. 11, lines 15-49 of Suzuki. Applicant respectfully traverses the rejection for the following reasons.

In column 3, lines 3-13, the reference discloses that control means vibrate a meniscus for a preset period of time. Vibration for a "preset" period of time fails to teach or disclose a unit that measures a continuous operating time of a micro-vibrating unit, as recited in claim 1. Rather, the preset period of time appears to disclose the claimed predetermined standard time stored in the claimed standard time storing unit (i.e., the time is preset or predetermined).

Further, in col. 8, lines 51-57 of Suzuki, the reference just discloses a first drive voltage signal and a second drive voltage signal that are used to unclog the nozzle openings. The first signal vibrates or displaces a meniscus near a nozzle opening at a small enough magnitude that ink is not ejected. The magnitude of the second signal is large enough so that ink is ejected from the nozzle openings. Applicant submits that the disclosure of a first and second drive voltage signal fails to teach or suggest a unit that measures a continuous operating time of a micro-vibrating unit, or the claimed predetermined standard time, as required by claim 1.

In col. 9, lines 10-17 of Suzuki, a print timing signal generating circuit 74 is disclosed for outputting a print timing signal. Applicant submits that the print timing signal generating circuit 74 fails to teach or disclose the claimed measuring unit, i.e., the output of a signal for a print time does not teach or suggest the measurement of a continuous operating time of a micro-vibrating unit in an out-of-jetting micro-vibrating area, nor does it teach or suggest the claimed predetermined standard time of an out-of-jetting micro-vibrating signal.

Regarding col. 11, lines 15-49, the reference discloses that print data 104 is transferred after a minute vibration voltage waveform terminates based on a shift clock signal. Similar to Applicant's comments above, the use of the shift clock signal does not teach or suggest the measurement of a continuous operating time of a micro-vibrating unit in an out-of-jetting micro-vibrating area. Rather, it would appear to merely teach a predetermined standard time of an out-of-jetting micro-vibrating signal.

Accordingly, even if Applicant assumes *arguendo* that Suzuki discloses a type of standard time storing unit, as set forth above, the reference still fails to teach or suggest the claimed measuring unit.

Claims 1 and 11 further recite a signal-generating controlling unit that can compare the continuous operating time of the claimed measuring unit and the predetermined standard time of the standard time storing unit. The controlling unit can cause the signal generating unit to change the out-of-jetting micro-vibrating signal based on a result of the comparison.

The Examiner maintains that Suzuki discloses the claimed signal-generating controlling unit. In particular, the Examiner maintains that the signal-generating controlling unit is disclosed in the same portions of Suzuki as recited above. However, as set forth above, Applicant submits that Suzuki fails to teach or disclose the claimed measuring unit. Thus, Suzuki fails to teach or disclose a controlling unit which compares the continuous operating time (measured by the measuring unit) and a predetermined standard time (stored by a standard-time storing unit). There is no "comparison" disclosed in any of the cited portions, nor a change of an out-of-jetting micro-vibrating unit based on the comparison.

During the August 9, 2005 Examiner Interview, the Examiner inquired as to why the claimed comparison is performed. As set forth in the non-limiting embodiment on pages 31 and 32 of the specification, if the continuous operating time of the out-of-recording micro-vibrating operation becomes longer than the standard time, the signal-generating controlling unit will cause the micro-vibrating signal generating part to change the strength of the out-of-recording micro-vibrating signal in regard to, for example, frequency or magnitude, to prevent deterioration of the piezoelectric vibrating members.

Based on the foregoing, Applicant submits that claims 1 and 11 are patentable, and respectfully requests the Examiner to reconsider and withdraw the rejection.

As noted above, claims 1 and 11 were discussed during the August 9, 2005 Examiner Interview. The Examiner indicated that Applicant's position appears reasonable, but that a closer review of the Suzuki reference would be performed.

B. Claims 2-7

Since claims 2-7 are dependent upon claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency.

C. Claims 8 and 12

Applicant submits that claims 8 and 12 are patentable over the cited reference. Claims 8 and 12 recite causing the micro-vibrating unit to operate for a first constant time and causing the micro-vibrating unit not to operate for a second constant time, while the capping mechanism

seals the nozzle, is repeated (see, for example, the non-limiting embodiment on page 33, lines 28-33).

The Examiner maintains that such feature is disclosed in col. 3, lines 3-13 and col. 16, lines 19-25 of Suzuki. However, as stated above, claims 8 and 12 require that the above operations are performed while the capping mechanism seals the nozzle. On the contrary, the cited portions of Suzuki disclose that the minute vibrations are performed when recording head 7 is not sealed by cap member 11 (col. 16, lines 19-20). Therefore, even if Applicant assumes *arguendo* that Suzuki disclosed the claims first constant time and second constant time, the reference still fails to teach or suggest every feature of claims 8 and 12.

As noted above, claims 8 and 12 were discussed during the August 9, 2005 Examiner Interview. The Examiner indicated that Applicant's position appears reasonable, but that a further review of Suzuki would be necessary upon receipt of Applicant's formal Response.

D. Claims 9 and 10

Since claims 9 and 10 are dependent upon claim 8, Applicant submits that such claims are patentable at least by virtue of their dependency.

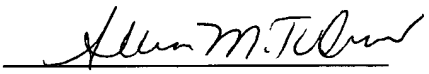
Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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